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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,377	07/27/2000	GERHARD SCHMITT	21551	2311
535	7590	03/24/2004	EXAMINER	
THE FIRM OF KARL F ROSS 5676 RIVERDALE AVENUE PO BOX 900 RIVERDALE (BRONX), NY 10471-0900			DUONG, THANH P	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,377

Applicant(s)

SCHMITT, GERHARD

Examiner

Tom P Duong

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ed

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims should refer to other claims in the alternative only--, and/or, --cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

Accordingly, the claim 6 is not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Priestley (4,021,184). Priestley discloses a fluidized bed reactor (10) for gasifying granular fuels (waste matter) where the fuel (conventional fluidized medium such as air, oxygen and/or steam) in the reactor forms a fixed bed and the fluidized medium is introduced by fuel guns 31, product gas (exhaust gas) containing hydrogen and carbon oxides (exhaust gas) is withdrawn from the reactor (10) through a discharge duct (gas conduits 46, 47) above the fixed bed, in the reactor at least one centrifugal separator (cyclone in Figure. 2) is provided for separating solids (solids discharge via solid outlet 77) from the product

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gas (exhaust gas), which has an inlet opening (cyclone gas inlet 73) and outlet line (exhaust conduit 78) for product gas, and a solids discharge line (43, 44) leading into the fixed bed (Col. 2, lines 56-57) where the outlet line (best understood by examiner as being the exhaust conduit 51) connected with the discharge duct (gas conduit 46, 47) of the reactor (10).

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mayers (2,958,298). Regarding claim 1, Mayers discloses a reactor (combustor 12) for gasifying granular fuels (anthracite coal, col. 4, lines 7-10) where the fuel (ash from the fuel or alumina silica, Col. 2, lines 1-2) in the reactor forms a fixed bed (11), lower portion oxygen-containing gasification medium (air) is introduced (rotary compressed air 14), product gas (heated gas) containing hydrogen and carbon oxides is withdrawn from the reactor through a discharge duct (line 17) above the fixed bed, characterized in the reactor (combustion 12) at least one centrifugal separator (cyclone separators 16) is provided for separating solids from the product gas (heated gas), which has an inlet opening (not shown but inherent feature of cyclone) for dust laden product gas coming from the fixed bed, an outlet line for the product gas (heated gas exiting thru line 17), a solid discharge line (gate device 23), where the outlet line (best understood by examiner as being the heated gas exiting thru line 17) connected with the discharge duct (line 17) of the reactor (combustion 12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayers '298 in view of Angell (2,433,726). Regarding claims 2-4, Mayers does not disclose the outlet lines of the separators open into an annular chamber disposed in the upper portion of the reactor, which annular chamber communicates with the discharge duct, a vertical annular wall, and the separator is disposed outside the portion enclosed by the vertical annular wall. Angell teaches separators 22 are disposed outside the portion enclosed by the annular chamber (conical lower section 4), which has an inclined, vertical annular wall. Angell also shows the outlet line of the separators 22 is disposed in the header 25 (discharge duct) and the header 25 is communicated with the annular chamber (conical lower section 4) and the inlet opening of the separator is disposed outside the portion of the reactor enclosed by the vertical annular wall. The inclined, vertical annular wall isolates the vapors and gases (Col. 5, lines 26-35) in the header 25 from mixing with the incoming regenerating gas from line 13. Thus, it would have been obvious in view of Angell to one having ordinary skill in the art to modify the reactor of Mayers with annular chamber having a vertical annular wall as taught by Angell in order to prevent intermixing of the vapors and gases from header with the incoming regenerating gas. Regarding claim 5, the prior art does not show the

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separator is disposed inside the portion enclosed by the annular wall. However, the combustor 12 of Mayers in view of Angell can be designed so that the separators of Mayers can either be disposed outside or inside the vertical annular chamber just as long as the separators can affectively remove or separate the entrained dust (Col. 3, lines 5-10) and/or "light" ash from the rising hot gases. Furthermore, applicant has not disclosed criticality or unexpected results of having a separator mounted inside or outside the vertical annular wall; thus, such separator's configuration in view of prior art appears to be a matter of design choice.

Conclusion

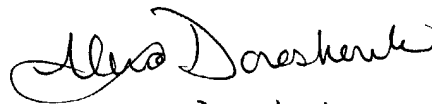
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TD
March 8, 2004



Alexa Doroshenko
Patent Examiner
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